

CLAIMS

1. A thin film transistor comprising:
a conductive film provided so as to be fitted in a first insulating film;
a second insulating film provided to cover the first insulating film and the
5 conductive film; and
a semiconductor film provided over the second insulating film,
wherein the first insulating film and the conductive film have an almost flat
surface.
- 10 2. A thin film transistor comprising:
a gate electrode provided so as to be fitted in an insulating film;
a gate insulating film provided to cover the insulating film and the gate electrode;
and
a semiconductor film provided over the gate insulating film,
15 wherein the insulating film and the gate electrode have an almost flat surface.
3. A thin film transistor comprising:
a source electrode and a drain electrode provided so as to be fitted in a first
insulating film;
20 a second insulating film provided to cover the first insulating film, and the source
electrode and the drain electrode; and
a semiconductor film provided over the second insulating film,
wherein the first insulating film, and the source electrode and the drain electrode
have an almost flat surface.
- 25 4. A thin film transistor comprising:
an insulating film having a depression and a projection;
a gate electrode provided over the depression;
a gate insulating film provided to cover the insulating film and the gate electrode;
30 and

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a semiconductor film provided over the gate insulating film,
wherein a height of the gate electrode and a height of the projection are trued up.

5. A thin film transistor comprising:

- 5 an insulating film having a depression and a projection;
a gate electrode provided over the depression;
a gate insulating film provided to cover the insulating film and the gate electrode;
and
a semiconductor film provided over the gate insulating film,
10 wherein a height of the gate electrode and a height of the projection are trued up,
and
an end of the gate insulating film is provided so as not to protrude from an end of
the semiconductor film.

- 15 6. A thin film transistor according to any one of Claims 1 to 5,
wherein an insulating film is provided over a channel region of the semiconductor
film.

7. A thin film transistor comprising:

- 20 a first insulating film having a depression and a projection;
a source electrode and a drain electrode provided over the depression;
a second insulating film provided to cover the first insulating film, and the source
electrode and the drain electrode; and
a semiconductor film provided over the second insulating film,
25 wherein heights of the source electrode and the drain electrode, and a height of the
projection are trued up.

8. A thin film transistor according to any one of Claims 4 to 7,

- wherein a width of the depression is 5 μm to 100 μm , and
30 a height difference between the depression and the projection is 1 μm to 10 μm .

9. A thin film transistor according to Claim 7 or Claim 8,
wherein a width of the depression in a region where the gate electrode is to be
formed is 5 μm to 20 μm , and
5 a height difference between the depression and the projection is 1.5 μm to 2.5 μm .

10. A thin film transistor according to Claim 4,
wherein a width of the depression in a region where the source electrode and the
drain electrode are to be formed is 10 μm to 40 μm , and
10 a height difference between the depression and the projection is 1.5 μm to 2.5 μm .

11. A thin film transistor according to any one of Claims 1 to 10,
wherein the semiconductor film is formed from a semiconductor added with
hydrogen or halogen.

15 12. A display device comprising:
a first and a second thin film transistors; the first and the second thin film
transistors comprising:

20 a first insulating film having at least two depressions and at least one
projection;

a first and a second gate electrodes provided over the at least two
depressions;

a gate insulating film provided to cover the first insulating film and the
first and the second gate electrodes;

25 a first and a second semiconductor films provided over the gate
insulating film; and

a first source electrode and a first drain electrode provided over the first
semiconductor film;

30 a second source electrode and a second drain electrode provided over the
second semiconductor film;

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a first electrode electrically connected to the second source electrode or the second drain electrode of the second thin film transistor;

a second insulating film provided to cover an end of the first electrode;

an electroluminescent layer provided in a hole of the second insulating film; and

5 a second electrode provided to cover the electroluminescent layer,

wherein the first source electrode or the first drain electrode of the first transistor is electrically connected with the second gate electrode of the second thin film transistor.

13. A display device comprising:

10 a first and a second thin film transistors; the first and the second thin film transistors comprising:

a first insulating film having at least two depressions and at least one projection;

15 a first and a second gate electrodes provided over the at least two depressions;

a gate insulating film provided to cover the first insulating film and the first and the second gate electrodes;

a first and a second semiconductor film provided over the gate insulating film; and

20 a first source electrode and a first drain electrode provided over the first semiconductor film;

a second source electrode and a second drain electrode provided over the second semiconductor film;

25 a first electrode connected to the second source electrode or the second drain electrode of the second thin film transistor;

a second insulating film provided to cover an end of the first electrode;

an electroluminescent layer provided in a hole of the second insulating film; and

a second electrode provided to cover the electroluminescent layer,

30 wherein the gate insulating film is etched with the use of the first source electrode and the first drain electrode, and

the first source electrode or the first drain electrode which is formed over the first semiconductor film is connected with the second gate electrode with the use of a conductive film provided in a hole of the etched gate insulating film.

5 14. A display device comprising:

a first and a second thin film transistors; the first and the second thin film transistors comprising:

a first insulating film having at least two depressions and at least one projection;

10 a first and a second gate electrodes provided over the at least two depressions;

a gate insulating film provided to cover the first insulating film and the first and the second gate electrodes;

15 a first and a second semiconductor film provided over the gate insulating film; and

a first source electrode and a first drain electrode provided over the first semiconductor film;

a second source electrode and a second drain electrode provided over the second semiconductor film;

20 a first electrode connected to the second source electrode or the second drain electrode of the second thin film transistor;

a second insulating film provided to cover an end of the first electrode;

an electroluminescent layer provided in a hole of the second insulating film; and

a second electrode provided to cover the electroluminescent layer,

25 wherein the first source electrode or the first drain electrode is connected with the second gate electrode.

15. A display device according to any one of Claims 12 to 14,

30 wherein a color filter is provided in a hole of the first insulating film below the electroluminescent layer.

16. A television comprising:

a first and a second thin film transistors; the first and the second thin film transistors comprising:

5 a first insulating film having at least two depressions and at least one projection;

a first and a second gate electrodes provided over the at least two depressions;

10 a gate insulating film provided to cover the first insulating film and the first and the second gate electrodes;

a first and a second semiconductor films provided over the gate insulating film; and

a first source electrode and a first drain electrode provided over the first semiconductor film;

15 a second source electrode and a second drain electrode provided over the second semiconductor film;

a first electrode electrically connected to the second source electrode or the second drain electrode of the second thin film transistor;

20 a second insulating film provided to cover an end of the first electrode; an electroluminescent layer provided in a hole of the second insulating films; and

a second electrode provided to cover the electroluminescent layer,

wherein the first source electrode or the first drain electrode of the first transistor is electrically connected with the second gate electrode of the second thin film transistor, and

25 a polarizing plate, and a polarizing plate and a wave plate are provided above the first electrode or the second electrode.

17. A television comprising:

30 a first and a second thin film transistors; the first and the second thin film transistors comprising:

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a first insulating film having at least two depressions and at least one projection;

a first and a second gate electrodes provided over the at least two depressions;

5 a gate insulating film provided to cover the first insulating film and the first and the second gate electrodes;

a first and a second semiconductor film provided over the gate insulating film; and

10 a first source electrode and a first drain electrode provided over the first semiconductor film;

a second source electrode and a second drain electrode provided over the second semiconductor film;

a first electrode connected to the second source electrode or the second drain electrode of the second thin film transistor;

15 a second insulating film provided to cover an end of the first electrode;

an electroluminescent layer provided in a hole of the second insulating film; and

a second electrode provided to cover the electroluminescent layer,

wherein the gate insulating film is etched with the use of the first source electrode and the first drain electrode, and

20 the first source electrode or the first drain electrode which is formed over the first semiconductor film is connected with the second gate electrode with the use of a conductive film provided in a hole of the etched gate insulating film, and

a polarizing plate, and a polarizing plate and a wave plate are provided above the first electrode or the second electrode.

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18. A television comprising:

a first and a second thin film transistors; the first and the second thin film transistors comprising:

30 a first insulating film having at least two depressions and at least one projection;

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a first and a second gate electrodes provided over the at least two depressions;

a gate insulating film provided to cover the first insulating film and the first and the second gate electrodes;

5 a first and a second semiconductor film provided over the gate insulating film; and

a first source electrode and a first drain electrode provided over the first semiconductor film;

a second source electrode and a second drain electrode provided over the
10 second semiconductor film;

a first electrode connected to the second source electrode or the second drain electrode of the second thin film transistor;

a second insulating film provided to cover an end of the first electrode;

an electroluminescent layer provided in a hole of the second insulating film; and

15 a second electrode provided to cover the electroluminescent layer,

wherein the first source electrode or the first drain electrode is connected with the second gate electrode, and

a polarizing plate, and a polarizing plate and a wave plate are provided above the first electrode or the second electrode.

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19. A television according to any one of Claims 16 to 18,

wherein a quarter wave plate and a half wave plate are sequentially provided as the wave plate from the first electrode or the second electrode.

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20. A method for manufacturing a thin film transistor, comprising the steps of:

forming a first insulating film having a depression and a projection;

forming a conductive film in the depression by spurting droplets containing a conductive material;

forming a second insulating film so as to cover the first insulating film and the
30 conductive film; and

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forming a semiconductor film over the second insulating film,
wherein the first insulating film and the conductive film are formed so that the
surfaces thereof are flat.

- 5 21. A method for manufacturing a thin film transistor, comprising the steps of:
forming a first insulating film having a depression and a projection;
forming a conductive film in the depression by spurling droplets containing a
conductive material;
forming a second insulating film so as to cover the first insulating film and the
10 conductive film;
forming a semiconductor film over the second insulating film; and
simultaneously patterning the second insulating film and the semiconductor film,
wherein the first insulating film and the conductive film are formed so that the
surfaces thereof are flat.

- 15 22. A method for manufacturing a thin film transistor, comprising the steps of:
forming an insulating film having a depression and a projection;
forming a conductive film in the depression by spurling droplets containing a
conductive material;
20 forming a second insulating film so as to cover the first insulating film and the
conductive film;
forming a semiconductor film over the second insulating film; and
simultaneously patterning the second insulating film and the semiconductor film,
wherein the first insulating film and the conductive film are formed so that the
25 surfaces thereof are flat, and
an end of the second insulating film is provided so as not to protrude from an end
of the semiconductor film.

23. A method for manufacturing a thin film transistor according to Claims 20 to
30 22,

wherein the conductive film is formed by spurring a composition containing a conductive material into the depression.

24. A method for manufacturing a thin film transistor according to any one of
5 Claims 20 to 22,

wherein a composition containing an insulating material is spurted and a composition containing a conductive material is simultaneously spurted, whereby forming the insulating film having the depression and the projection, and whereby forming a conductive film in the depression.

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25. A method for manufacturing a thin film transistor according to any one of Claims 20 to 22,

wherein the insulating film having the depression and the projection is formed by spurring a composition containing an insulating material, and

15 the conductive film is formed by spurring a composition containing a conductive material into the depression.

26. A method for manufacturing a thin film transistor according to Claim 25,
wherein the insulating film having the depression and the projection is formed by
20 spurring a composition containing an insulating material,

the insulating film is heated, and

the conductive material is formed by spurring a composition containing a conductive material into the depression.

25 27. A method for manufacturing a thin film transistor according to any one of Claims 20 to 26,

wherein an insulating film is formed over a channel region of the semiconductor film.

30 28. A method for manufacturing a thin film transistor, comprising the steps of:

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forming an insulating film having a depression and a projection;
forming a first and a second gate electrodes in the depression by spurting droplets containing a conductive material;
forming a gate insulating film so as to cover the insulating film, and the first and
5 the second gate electrodes;
forming a first and a second semiconductor films over the gate insulating film;
simultaneously patterning the gate insulating film and the first and the second semiconductor films;
respectively forming first and second source electrodes and drain electrodes over
10 the first and the second semiconductor films; and
connecting the source electrode or the drain electrode which is formed over the first semiconductor film with the second gate electrode,
wherein a height of the insulating film and a height of the gate electrode are trued
up.

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29. A method for manufacturing a thin film transistor, comprising the steps of:
forming an insulating film having a depression and a projection;
forming a first and a second gate electrodes in the depression by spurting droplets containing a conductive material;
20 forming a gate insulating film so as to cover the insulating film, and the first and the second gate electrodes;
forming a first and a second semiconductor films over the gate insulating film;
patterning the first and the second semiconductor films;
respectively forming first and second source electrodes and drain electrodes over
25 the first and the second semiconductor films; and
etching the gate insulating film with the use of the source electrode and the drain electrode,
wherein the source electrode or the drain electrode which is formed over the first semiconductor film is connected with the second electrode by forming a conductive film in
30 a hole of the etched gate insulating film, and

a height of the insulating film and a height of the gate electrode are trued up.

30. A method for manufacturing a thin film transistor, comprising the steps of:
forming a first insulating film having a depression and a projection;

5 forming a source electrode and a drain electrode in the depression by spurting droplets containing a conductive material;

forming a second insulating film so as to cover the first insulating film, and the source electrode and the drain electrode;

forming a semiconductor film over the second insulating film; and

10 forming a gate electrode over the semiconductor film with a gate insulating film therebetween;

wherein a height of the first insulating film and heights of the source electrode and the drain electrode are trued up.

15 31. A method for manufacturing a thin film transistor according to any one of Claims 20 to 30,

wherein the insulating film having the depression and the projection is formed so that the width of the depression is 5 μm to 100 μm , and the depth of the depression is 1 μm to 10 μm .

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32 A method for manufacturing a thin film transistor according to any one of Claims 28 to 31,

wherein the insulating film having the depression and the projection formed in a region where the source electrode and the drain electrode are to be formed so that the width
25 of the depression is 5 μm to 20 μm , and the depth of the depression is 1.5 μm to 2.5 μm .

33. A method for manufacturing a thin film transistor according to Claim 30 or Claim 31,

wherein the insulating film having the depression and the projection is formed in
30 a region where the source electrode and the drain electrode are to be formed so that the

width of the depression is 10 μm to 40 μm , and the depth of the depression is 1.5 μm to 2.5 μm .

34. A method for manufacturing a thin film transistor according to any one of
5 Claims 20 to 33,

wherein an amount of droplets containing a conductive material to be spurted is
0.1 pl to 40 pl.

35. A method for manufacturing a display device, comprising the steps of:
10 forming an insulating film having a depression and a projection;
forming a first and a second gate electrodes in the depression by spurling droplets
containing a conductive material;
forming a gate insulating film so as to cover the insulating film, and the first and
the second gate electrodes;
15 forming a first and a second semiconductor films over the gate insulating film;
simultaneously patterning the gate insulating film and the first and the second
semiconductor films;
respectively forming first and second source electrodes and drain electrodes over
the first and the second semiconductor films, thereby forming a first and a second thin film
20 transistors;
connecting the source electrode or the drain electrode which is formed over the
first semiconductor film with the second gate electrode;
forming a first electrode so as to be connected to the source electrode or the drain
electrode of the second thin film transistor;
25 forming a second insulating film so as to cover an end of the first electrode;
forming an electroluminescent layer in a hole of the second insulating film; and
forming a second electrode so as to cover the electroluminescent layer.

36. A method for manufacturing a display device, comprising the steps of:
30 forming an insulating film having a depression and a projection;

forming a first and a second gate electrodes in the depression by spurting droplets containing a conductive material;

forming a gate insulating film so as to cover the insulating film, and the first and the second gate electrodes;

5 forming a first and a second semiconductor films over the gate insulating film;

 patterning the first and the second semiconductor films;

 respectively forming first and second source electrodes and drain electrodes over the first and the second semiconductor films, thereby forming a first and a second thin film transistors;

10 etching the gate insulating film with the use of the source electrode and the drain electrode;

 connecting the source electrode or the drain electrode which is formed over the first semiconductor film with the second gate electrode by forming a conductive film in a hole of the etched gate insulating film,

15 forming a first electrode so as to be connected to the source electrode or the drain electrode of the second thin film transistor;

 forming a second insulating film so as to cover an end of the first electrode;

 forming an electroluminescent layer in a hole of the second insulating film; and

 forming a second electrode so as to cover the electroluminescent layer.

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37. A method for manufacturing a display device, comprising the steps of:

 forming a first insulating film having a depression and a projection;

 forming first and second source electrodes and drain electrodes in the depression by spurting droplets containing a conductive material;

25 forming a second insulating film so as to cover the first insulating film, and the first and the second source electrodes and drain electrodes;

 forming a first and a second semiconductor films over the second insulating film;

 patterning the first and the second semiconductor films;

 respectively forming a first and a second gate electrodes over the first and the
30 second semiconductor films with a gate insulating film therebetween, thereby forming a

first and a second thin film transistors;

connecting the first source electrode or drain electrode with the second gate electrode;

forming a first electrode so as to be connected to the source electrode or the drain electrode of the second thin film transistor;

forming a second insulating film so as to cover an end of the first electrode;

forming an electroluminescent layer in a hole of the second insulating film; and

forming a second electrode so as to cover the electroluminescent layer.

38. A method for manufacturing a display device according to any one of Claims 35 to 37,

wherein a color filter is provided in a hole of the insulating film below the electroluminescent layer.

39. A method for manufacturing a display device according to any one of Claims 35 to 38,

wherein an insulating film and a conductive film are formed to cover the second thin film transistor, and

the source electrode or the drain electrode of the second thin film transistor is connected with the first electrode with the use of the conductive film.

40. A method for manufacturing a display device according to any one of Claims 35 to 38,

wherein an insulating film and a conductive film are formed to cover the first and the second thin film transistors, and

the conductive film is formed over the source electrodes and the drain electrodes of the first and the second thin film transistors.

41. A method for manufacturing a television, comprising the steps of:

forming an insulating film having a depression and a projection;

forming a first and a second gate electrodes in the depression by spurting droplets containing a conductive material;

forming a gate insulating film so as to cover the insulating film, and the first and the second gate electrodes;

5 forming a first and a second semiconductor films over the gate insulating film;
 simultaneously patterning the gate insulating film and the first and the second semiconductor films;

 respectively forming first and second source electrodes and drain electrodes over the first and the second semiconductor films, thereby forming a first and a second thin film
10 transistors;

 connecting the source electrode or the drain electrode which is formed over the first semiconductor film with the second gate electrode;

 forming a first electrode so as to be connected to the source electrode or the drain electrode of the second thin film transistor;

15 forming a second insulating film so as to cover an end of the first electrode;
 forming an electroluminescent layer in a hole of the second insulating film;
 forming a second electrode so as to cover the electroluminescent layer; and
 forming a polarizing plate, and a polarizing plate and a wave plate above the first electrode or the second electrode.

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42. A method for manufacturing a television, comprising the steps of:

 forming an insulating film having a depression and a projection;

 forming a first and a second gate electrodes in the depression by spurting droplets containing a conductive material;

25 forming a gate insulating film so as to cover the insulating film, and the first and the second gate electrodes;

 forming a first and a second semiconductor films over the gate insulating film;

 patterning the first and the second semiconductor films;

 respectively forming first and second source electrodes and drain electrodes over
30 the first and the second semiconductor films, thereby forming a first and a second thin film

transistors;

etching the gate insulating film with the use of the source electrode and the drain electrode,

connecting the source electrode or the drain electrode which is formed over the first semiconductor film with the second gate electrode by forming a conductive film in a hole of the etched gate insulating film,

forming a first electrode so as to be connected to the source electrode or the drain electrode of the second thin film transistor;

forming a second insulating film so as to cover an end of the first electrode;

forming an electroluminescent layer in a hole of the second insulating film;

forming a second electrode so as to cover the electroluminescent layer; and

forming a polarizing plate, and a polarizing plate and a wave plate above the first electrode or the second electrode.

43. A method for manufacturing a television, comprising the steps of:

forming a first insulating film having a depression and a projection;

forming first and second source electrodes and drain electrodes in the depression by spurring droplets containing a conductive material;

forming a second insulating film so as to cover the first insulating film, and the first and the second source electrodes and drain electrodes;

forming a first and a second semiconductor films over the second insulating film;

patterning the first and the second semiconductor films;

respectively forming a first and a second gate electrodes over the first and the second semiconductor films with a gate insulating film therebetween, thereby forming a first and a second thin film transistors;

connecting the first source electrode or drain electrode with the second gate electrode with the use of the second gate electrode;

forming a first electrode so as to be connected to the source electrode or the drain electrode of the second thin film transistor;

forming a second insulating film so as to cover an end of the first electrode;

forming an electroluminescent layer a hole of the second insulating film;
forming a second electrode so as to cover the electroluminescent layer; and
forming a polarizing plate, and a polarizing plate and a wave plate above the first
electrode or the second electrode.

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44. A method for manufacturing a television according to any one of Claims 41 to
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wherein a quarter wave plate and a half wave plate are sequentially provided as
the wave plate from the first electrode or the second electrode.

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45. A liquid crystal display device in which a resin is formed around at least one
conductor formed over one of two substrates sandwiching liquid crystal.

46. A liquid crystal display device in which a resin is formed around at least one
15 conductor formed over one of two substrates sandwiching liquid crystal, and
the conductor is formed to be in contact with a layer containing a 3d transition
element or oxide, nitride, or oxynitride thereof.

47. A liquid crystal display device in which liquid crystal is sandwiched between
20 a substrate having an active element and a counter substrate, and
a resin is formed around at least one conductor formed over the substrate having
an active element.

48. A liquid crystal display device in which liquid crystal is sandwiched between
25 a substrate having an active element and a counter substrate,
a resin is formed around at least one conductor formed over the substrate having
an active element, and
the conductor is formed to be in contact with a layer containing a 3d transition
element or oxide, nitride, or oxynitride thereof.

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49. A liquid crystal display device in which liquid crystal is sandwiched between a substrate having an active element and a counter substrate,

a resin is formed around at least one conductor formed over the substrate having an active element, and

5 a channel protective film formed from a material having at least one of polyimide, acrylic, and a material which has a skeleton formed with a bond of silicon and oxygen, and which includes at least hydrogen as a substituent, or at least one of fluorine, alkyl group, and aromatic hydrocarbon as a substituent.

10 50. A liquid crystal display device in which liquid crystal is sandwiched between a substrate having an active element and a counter substrate,

a resin is formed around at least one conductor formed over the substrate having an active element,

15 the conductor is formed to be in contact with a layer containing a 3d transition element or oxide, nitride, or oxynitride thereof, and

a channel protective film formed from a material having at least one of polyimide, acrylic, and a material which has a skeleton formed with a bond of silicon and oxygen, and which includes at least hydrogen as a substituent, or at least one of fluorine, alkyl group, and aromatic hydrocarbon as a substituent.

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51. A liquid crystal display device according to any one of Claims 45 to 50, wherein the resin is a transparent photosensitive resin.

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52. A liquid crystal display device according to any one of Claims 47 to 50, wherein the resin has a function of a color filter.

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53. A liquid crystal display device according to Claim 45 or Claim 46, wherein a color filter layer is formed over the other substrate, and a black matrix is formed around the color filter layer.

54. A liquid crystal display device according to any one of Claims 47 to 50, wherein a color filter layer is formed over the counter substrate, and a black matrix is formed around the color filter layer.

5 55. A liquid crystal display device according to any one of Claims 45 to 54, wherein the conductor includes Ag, Cu, Au, or Ni.

56. A method for manufacturing a liquid crystal display device, comprising the steps of:

10 forming a resin for forming a pattern of a gate electrode layer over a substrate;
forming the gate electrode layer by discharging a composition including a first conductive material to a hole of the resin;

forming a gate insulating film over the gate electrode layer;

forming a semiconductor film over the gate insulating film;

15 forming a semiconductor film containing an impurity element over the semiconductor film; and

forming a source electrode layer and a drain electrode layer by discharging a composition containing a second conductive material over the semiconductor film containing the impurity element; thus, an active element is obtained,

20 wherein liquid crystal is sandwiched between a substrate having the active element and a counter substrate.

57. A method for manufacturing a liquid crystal display device, comprising the steps of:

25 forming a first resin for forming a pattern of a gate electrode layer over a substrate;

forming the gate electrode layer by discharging a composition including a conductive material to a hole of the first resin;

forming a gate insulating film over the gate electrode layer;

30 forming a semiconductor film over the gate insulating film;

forming a semiconductor film containing an impurity element over the semiconductor film;

forming a second resin for forming a pattern of a source electrode layer and a drain electrode layer over the semiconductor film containing the impurity element and the
5 gate insulating film; and

wherein the source electrode layer and the drain electrode layer are formed by discharging a composition containing a second conductive material to a hole of the second resin; thus, an active element is obtained,

wherein liquid crystal is sandwiched between a substrate having the active
10 element and a counter substrate.

58. A method for manufacturing a liquid crystal display device according to Claim 56,

wherein base pretreatment is performed before or after the resin is formed.
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59. A method for manufacturing a liquid crystal display device according to Claim 57,

wherein base pretreatment is performed before or after the first resin is formed.

20 60. A method for manufacturing a liquid crystal display device according to Claim 56,

wherein compositions each containing the resin and the first conductive material are applied simultaneously by a droplet discharge method.

25 61. A method for manufacturing a liquid crystal display device according to Claim 57,

wherein compositions each containing the first resin and the first conductive material or compositions containing the second resin and the second conductive material are applied simultaneously by a droplet discharge method.

62. A method for manufacturing a liquid crystal display device according to Claim 56 or Claim 57,

wherein the resin is a transparent photosensitive resin.

5 63. A method for manufacturing a liquid crystal display device according to Claim 56 or Claim 57,

wherein the resin has a function of a color filter.

64. A method for manufacturing a liquid crystal display device according to any
10 one of Claims 56 to 63,

wherein a color filter layer is formed over the counter substrate, and
a black matrix is formed around the color filter layer.

65. A method for manufacturing a liquid crystal display device according to any
15 one of Claims 56 to 63,

wherein the first or the second conductive material includes Ag, Cu, Au, or Ni.

66. A method for manufacturing a liquid crystal display device according to any
one of Claims 56 to 63,

20 wherein the first or the second conductive material includes particles in which Cu
is coated with Ag with a buffer layer therebetween, and
the buffer layer is formed of Ni or NiB (nickel boron).